

What is claimed is:

- 09320457-052799
1. An optical symbol reading device comprising:
- an image data input section that is provided with an image data input unit for receiving a bar code label, characters, symbols, or image data on an article that is
- 5 moved by a conveyor, and an image data input focus point modifier;
- an article detector for detecting that said article has entered a read zone;
- an interpreter for converting electric signals from said
- 10 image data input section to numbers or characters;
- an interpretation result output section for outputting the interpretation results of said interpreter to an external device;
- a front surface/back surface position detector for
- 15 detecting a position on said conveyor of a front surface or back surface of an article that is moved by said conveyor, and
- an image data input focus point control section for outputting data from said front surface/back surface
- 20 position detector to said image data input focus point modifier.

2. An optical symbol reading device according to claim 1 wherein said front surface/back surface position detector comprises:

means that is provided with a light projection position
5 detector and a light reception position detector made up
of a plurality of transmissive multiple optical axis
sensors, for finding the position of the front surface or
back surface of said article by detecting which
transmissive multiple optical axis sensors of the
10 plurality of transmissive multiple optical axis sensors of
said light projection position detector are being shielded
by said article.

3. An optical symbol reading device according to
claim 1 wherein said front surface/back surface position
detector comprises:

means provided with a rotary encoder that is attached to
5 said conveyor, for finding the position of the front
surface or back surface of said article by counting pulses
from said rotary encoder and measuring a distance of
movement of said conveyor.

4. An optical symbol reading device according to
claim 1 wherein said image data input focus point control
section comprises:

means for converting front surface/back surface position
5 data of said article that are received from said front
surface/back surface position detector to a reading
distance, which is the distance between said image data

input unit and the front surface or back surface of said article, and outputting said reading distance as focus
10 point data to said image data input focus point modifier.

5. An optical symbol reading device according to claim 1 wherein said image data input focus point modifier comprises:

means for matching the focus point to the front
5 surface or back surface of said article that moves constantly over time by setting the focus point to a position designated by said focus point data that are received from said image data input focus point control section.

6. An optical symbol reading device according to claim 1 further comprising:

means for reading two surfaces, i.e., a side surface /back surface or a side surface/front surface, of an article moved by a conveyor by fixing a focus on a
5 position of said side surface and reading said side surface when receiving a bar code label, characters, symbols, or image data on the side surface of said article from said image data input unit.

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A2

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D2

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F3